

NEW TAXA IN VICTORIAN POACEAE (2)

by

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ABSTRACT

Walsh, N.G. New taxa in Victorian Poaceae (2). *Muelleria* 7(4): 451–456 (1992). — A new variety of *Poa* (*P. hothamensis* var. *parviflora*), and a new species of *Deyeuxia* (*D. pungens*) and *Dichelachne* (*D. hirtella*) are described and illustrated. Their distribution, conservation status, ecology and their relationships with other species are discussed.

INTRODUCTION

This is the second paper by the present author recording new Victorian Poaceae taxa detected in the course of preparing descriptions for a forthcoming state flora. The earlier article appeared in *Muelleria* Vol.7 No. 3 (1991).

TAXONOMY

POA L.

Poa hothamensis Vick. var. *parviflora* N.G. Walsh var. nov.

A *P. hothamensis* var. *hothamensis* flosculis parvioribus, foliis subvelutinis paginis ambabis, laminis flaccidis, planis vel plicatis leviter et stolonibus facientibus saepe differt.

TYPUS: Victoria, East Gippsland, Brodribb River near and including BA Creek junction, 17 Jan. 1986, E.A. Chesterfield 677 (HOLOTYPE: MEL; ISOTYPE: BRI, CANB, RSA).

Differs from *P. hothamensis* var. *hothamensis* in the following features: the smaller florets, 1.5–2.6 mm long in var. *parviflora*, compared with 2.75–3.75 mm in the typical variety; the leaf-blades which are flat or weakly folded, flaccid, and moderately densely covered on both surfaces with short, fine, spreading hairs in the new variety, whereas the blades of the typical variety are generally firm, folded, and glabrous or minutely scabrous-pubescent on the lower surface (but with scattered fine hairs on the upper surface); the lower internodes which are velutinous, with hairs 0.3 mm long or more in var. *parviflora* but smooth to scabrous-pubescent with hairs mostly < 0.1 mm in var. *hothamensis*; the growth habit which is usually stoloniferous in var. *parviflora* but rhizomatous in the typical variety; the inflorescence which in most mature specimens of var. *parviflora* examined are very open, with widely divaricate, almost capillary branches and pedicels, whereas those of var. *hothamensis* are typically rather narrowly pyramidal, with ascending branches and have a 'heavier' appearance. (Fig 1 a-d)

SPECIMENS EXAMINED:

Victoria — East Gippsland, Between Bonang Highway and Mt Ellery, 25 Nov. 1970, A.C. Beaglehole 34941 (MEL, NSW); East Gippsland, Goolengook Rd, 0.9 km N of Goolengook R, 19 Jan 1989, I.D. Lunt 312 (MEL); East Gippsland, Brodribb Forest Management Block, 14 Mar. 1986, E.A. Chesterfield 924 (BRI, CANB, MEL, RSA); East Gippsland, Ellery Forest Block, Sardine Ck Rd, 450 m N of Pumpkin Hill Tk, 7 Jan, 1987, G.E. Earl 365 (MEL); East Gippsland, Gorge of Rodger R., c. 1.5

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km upstream from Snowy R confluence, 26 Nov 1990, *N.G. Walsh 3025* (MEL, NSW); Mt Porepun-kah, c. 8 km N of Bright, 29 Nov. 1973, *A.C. Beauglehole 43677* (MEL, NSW); Pretty Valley Ck, 24 Jan. 1967, *A.C. Beauglehole 22445* (MEL); Rodda Ck Tk, 13 km N of Mt Bogong, 1 Dec. 1973, *A.C. Beauglehole 43705* (MEL).

DISTRIBUTION AND CONSERVATION STATUS:

Poa hothamensis var. *parviflora* is apparently endemic in Victoria with most occurrences in the foothills and lower ranges north of Orbost, East Gippsland, in the catchments of the Yalmy, Rodger and Brodribb Rivers. Most occurrences are within State Forest, but at least one is in the Snowy River National Park. Occurrences north of the Dividing Range in the Bright-Mt Beauty area (e.g. *Beauglehole 43677*, *33445*, *43705*) are tentatively referred to var. *parviflora* at present (see notes below).

The taxon is regarded as rare by Gullan *et al.* (1990) where referred to as *Poa* sp. aff. *hothamensis*.

HABITAT:

Collectors notes accompanying East Gippsland specimens indicate a tendency for *P. hothamensis* var. *parviflora* to occur on dryish rocky slopes in open forest with canopy species including *Eucalyptus globoidea*, *E. elata*, *E. smithii* and *Allocasuarina littoralis*, but occasionally extending to wetter forests of *E. obliqua*, *E. cypellocarpa* and *E. radiata*. Specimens from the Bright-Mt Beauty area are recorded as being associated with *Eucalyptus pauciflora*, *E. delegatensis* and *E. dives*, but further ecological data are not provided.

This variety appears to inhabit drier sites at lower altitudes (as low as c. 150 metres a.s.l.) than does the typical which is a grass of alpine or subalpine shrubland or woodland. Some specimens of var. *parviflora* are from altitudes approaching those at which the typical variety grows, but there is no evidence of the two occurring together.

NOTES:

In the almost velutinous indumentum of var. *parviflora*, there is a resemblance to *P. petrophila* and *P. morrisii*, but from the former, it is distinguishable by the flat leaf-blades and the latter by the purple pigmentation of the sheaths, and from both by its stoloniferous habit, and the broadly divaricate, finely branched panicle with smaller florets and spikelets.

Specimens from the Bright-Mt Beauty area differ slightly from East Gippsland collections in having a coarser indumentum on the outer leaf surface. The inflorescences of these specimens are generally too immature to predict whether the branches will ultimately acquire the sparse, widely divaricate arrangement which is a striking feature of most East Gippsland specimens. Considering these factors and the lack of ecological information available for these collections, they are only tentatively referred to the new variety pending further collections and information.

Occasional plants of *P. hothamensis* var. *hothamensis* growing in deep shade or otherwise very sheltered sites in the alps may be considerably hairier on the sheaths (and rarely, on the lower surface of the blades) and may have less folded blades than nearby specimens growing in the open. In these respects, they may resemble var. *parviflora*, but in the other features discussed above they match the typical variety.

The varietal epithet refers to the small flowers (florets and spikelets) of the new taxon relative to those of var. *hothamensis*.

DEYEUXIA Clar. ex P. Beauv.

Deyeuxia pungens N.G. Walsh sp. nov.

Deyeuxia angustifolia Vick. affinis paniculis majoribus, lemmatibus quintuplinervibus, mem-

branaceis internervis, truncatis vel erosis apicibus, arista gracili vel nulla, callo pubescente, ligula longiore, et statura robustiore differt.

HOLOTYPE: Victoria — East Gippsland, Ballantynes Hills, 8 Jan. 1949, *N.A. Wakefield* 2762 (MEL).

Tufted perennial, culms strongly erect, to c. 100 cm high. *Leaves* scabrous, rather strongly ribbed; blades mostly closely inrolled, to 45 cm long \times 1.5 mm diam, rigidly erect and more or less needle-pointed; ligule papery, acute, soon disintegrating, 4–11 mm long. *Inflorescence* a contracted, almost spike-like panicle, sometimes interrupted and/or narrowly lobed near the base, 10–30 cm \times 5–25 mm; spikelets narrow, 4–5 mm long, purplish, maturing to straw-coloured; glumes equal, acuminate, sometimes shortly mucronate, scabrous along the keel, scaberrulous on the sides; lemma subequal to glumes, 5-nerved, smooth or sparsely and minutely scabrous, thin-textured between the nerves, hyaline toward the narrowly truncate or erose apex, awnless or awned from just below the apex; awn (when present) fine, straight, to c. 0.5 mm long, not exceeding lemma and remaining more or less appressed to it; callus hairs c. 1 mm long; rhachilla bristle c. 0.3 mm long, glabrous or with a short terminal hair tuft; anthers c. 2 mm long. (Fig. 1 e-h)

OTHER SPECIMENS EXAMINED:

Victoria — from type locality: 7 Jan. 1970, *A.C. Beaglehole* 33390 (MEL, NSW); 8 Jan. 1949, *N.A. Wakefield* 2671 and 2763 (MEL); 16 Jan. 1948, *N.A. Wakefield* 2176 (MEL); 16 Jan. 1948, *J.H. Willis* (MEL); Rocky Knob, near Bridle Creek, c. 1.6 km S. of Suggan Buggan River crossing, 6 Jan. 1970, *A.C. Beaglehole* 33250 (MEL, NSW); Suggan Buggan, Dec. 1939, *W. Hunter* (MEL).

DISTRIBUTION AND CONSERVATION STATUS:

Apparently endemic in Victoria where known only from the type locality at Ballantyne Hills near Suggan Buggan and another site shortly to the north. Both localities are contained within the Alpine National Park (Cobberas-Tingaringy unit). *Deyeuxia pungens* is likely to occur elsewhere in the area and possibly extends across the border (c. 13 km away) into New South Wales. The remoteness of and difficult access to similar sites in the area may account for the lack of further records of the species. The species is regarded by Gullan *et al.* (1990) as 'vulnerable'.

HABITAT:

Deyeuxia pungens occurs amongst rocks on and near the summit area of Ballantyne Hills which is a series of turret-like projections of Silurian granite or granodiorite. The mean annual rainfall is c. 600 mm, and the altitude c. 200 m. Other species occurring in the vicinity include *Eucalyptus nortonii*, *Eriostemon trachyphyllus*, *Phebalium lamprophyllum*, *Olearia iodochroa*, *Psilotum nudum* and *Haloragodendron bauerlenii*, the latter two species being regarded as 'rare' in Victoria (Gullan *et al.*, 1990).

NOTES:

This species has been referred to as *Deyeuxia* sp. aff. *angustifolia* (e.g. Willis, 1970; Ross, 1990) following determination of a specimen sent to the late J.W. Vickery (NSW) in 1948. With her determination, Vickery noted several features which differed from the typical form of *D. angustifolia* 'viz. callus somewhat hairy, spikelets very slightly shorter, awn inconspicuous and not thickened'. Further examination shows *D. pungens* to consistently differ from *D. angustifolia* in the larger panicle, the virtually smooth (c.f. densely scaberrulous), 5- (not 7-) nerved lemma which is membranous (c.f. firm) between the nerves, and erose (c.f. truncate or bifid) at the apex, the longer, papery (c.f. membranous) ligule and the generally more robust habit. True *D. angustifolia* is a rather localized grass occur-

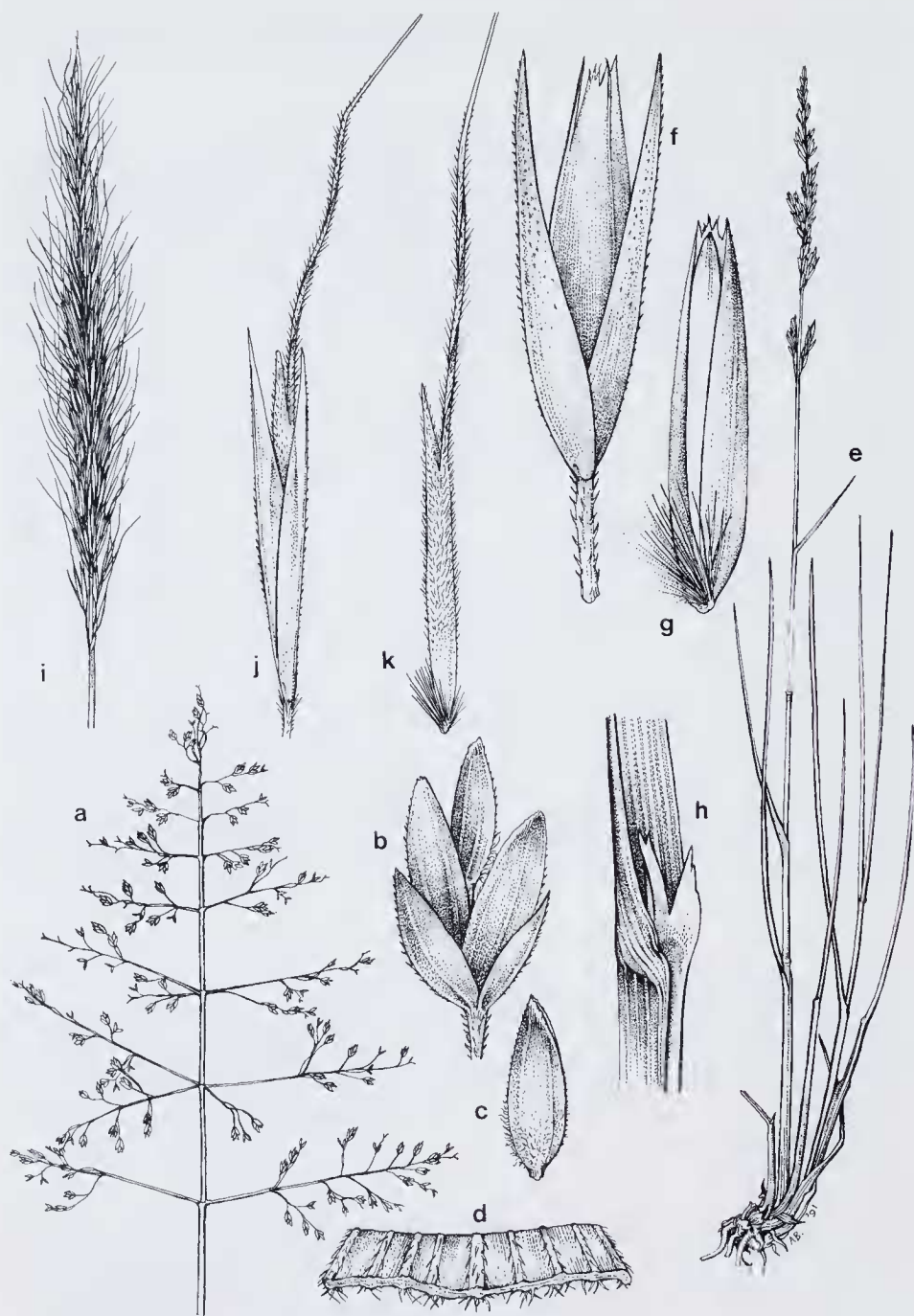


Fig. 1. *Poa hothamensis* var. *parviflora*. a — inflorescence $\times 2/3$, b — spikelet $\times 12$, c — lemma $\times 12$, d — t.s. leaf blade $\times 15$. a-d from the holotype (MEL). *Deyeuxia pungens*. e — habit $\times 1/3$, f — spikelet $\times 12$, g — floret $\times 12$, h — ligule and part of leaf $\times 6$. e-h from Wakefield 2761 (MEL). *Dichelachne hirtella*. i — inflorescence $\times 1/2$, j — spikelet $\times 6$, k — floret $\times 6$. i-k from the holotype (MEL).

ring on sandstones of the Central and Southern Tablelands of New South Wales.

The specific epithet refers to the stiff, needle-pointed leaves.

DICHELACHNE Endl.

Dichelachne hirtella N.G. Walsh *sp. nov.*

Dichelachne rara (R. Br.) Vick. *affinis* lemmate longiore, brevo-pubescente, lobis apicibus longioribus, arista longiora et pubescenti differt.

HOLOTYPE: Victoria — Grampians, Mt Arapiles, on top, within *c.* 250 yards S to W of P.M.G. tower, *A.C. Beaglehole* 29609 (MEL).

Narrowly tufted annual or perennial with culms erect, mostly to *c.* 60 (rarely to *c.* 150) cm high. *Leaves* smooth or scabrous, glabrous to shortly pubescent; blades flat or weakly folded, to 15 cm long, 1–4 mm wide; ligule membranous, truncate, to 1.5 mm long. *Inflorescence* a moderately to quite dense, cylindrical panicle (6–) 8–15 (–25) cm long, with short, erect branches bearing spikelets from the base; glumes narrowly acute, 6.5–10 (mostly 7–8) mm long, subequal, rarely the lower up to 1.5 mm shorter than the upper; floret slender, subequal to lower glume, 6–8 mm long; lemma scabrous-pubescent with hairs 0.2–0.3 mm long, sometimes subglabrous near base; awn inserted 1–2 (av. 1.4) mm from lemma apex, (15–) 20–26 (–30) mm long, column pubescent with hairs to 0.3 mm long, twisted, bristle scabrous, narrower than column and not twisted; palea reaching to about the point of attachment of awn, glabrous or weakly pubescent along the midline and upper margins; callus hairs 1–1.8 mm long; anthers 2 or 3 in specimens observed, *c.* 0.5 mm (cleistogamous florets) or 1–1.5 mm (chasmogamous florets). (Fig. 1 i–k)

OTHER SPECIMENS EXAMINED:

Victoria — Burrowa National Park, Jemba Reference area, 24 Oct. 1987, *A.C. Beaglehole* 89279 (MEL); Chiltern Regional Park, 15 Nov. 1987, *A.C. Beaglehole* 92028 (MEL); Grampians, Mt Zero-Mt Stapylton area, 5 Nov. 1967, *A.C. Beaglehole* 17852 (MEL); 2 km SSE of Red Bank, 37 km S of St Arnaud, 22 Nov. 1979, *A.C. Beaglehole* 66628A (MEL); Stawell, Three Jacks Reserve — fenced plot, 17 Nov. 1966, *A.C. Beaglehole* 22008 (MEL); Mt Buffalo Reference area, 19 Nov. 1987, *A.C. Beaglehole* 92361 (MEL); Wellsford Forest, 14 km NE of Bendigo, 24 Jul. 1975, *A.C. Beaglehole* 50006 (MEL); Junction Macalister and Caledonia River, 7 Dec. 1973, *E.A. Chesterfield* (MEL); McKenzie Flora Reserve near Alexandra, 8 Nov. 1985, *J. Edwards* 23 (MEL); Wabonga State Park, 1 km S of Cherry Tree junction, 14 Jan. 1987, *A. Piesse* 757 (MEL); Creswick, mid Nov. 1928, *J.H. Willis* (MEL).

New South Wales (including A.C.T.) — Lower western slope of Mt Jerrabomberra, Queanbeyan, 23 Nov. 1961, *R. Pullen* 2967 (A.BM,BRI,CANB,G,K,L,MEL,NE,NSW,US); Dividing Range, between Braidwood and Bungendore, 6 Dec. 1963, *R. Pullen* 3976 (CANB); Kowen Forest, north-eastern A.C.T., 8 Dec. 1966, *R. Pullen* 4234 (AD,BAA,CHR,K,NSW,US); Weetangera Rd, Canberra, A.C.T., 7 Nov. 1959, *R. Pullen* 1958 (CANB,NSW); near Botanic Gardens reserve on E. side of Black Mtn, Canberra, A.C.T., 4 Jan. 1959, *R. Pullen* 1249 (AD,NSW)

DISTRIBUTION AND CONSERVATION STATUS:

Known in Victoria from the Grampians in the west to central Gippsland in the east, extending to the N.S.W. border in the north-east. The species also occurs in southern New South Wales in the Queanbeyan-Braidwood district, and in the Australian Capital Territory (Southern Tablelands Division). *D. hirtella* is well represented in biological reserves and is not considered to be rare.

HABITAT:

Most collections of *D. hirtella* are from rather dry (500–800 mm av. annual rainfall) areas with skeletal, often rocky soils. Ecological notes accompanying specimens give 'peppermint open forest with low shrubland and open grassland below' (*Piesse* 757), 'dry sclerophyll forest (with) *Eucalyptus polyanthemos*, *E. macrorhyncha*, *E. melliodora* & *E. camaldulensis*' (*Edwards* 23), 'heathy woodland' (*Pullen* 2967).

NOTES:

Specimens of *D. hirtella* have been identified as *D. rara* (R.Br.) Vick. and, prior to treatments such as Edgar and Connor (1982) and Veldkamp (1974), as *D. micrantha* (Cav.) Domin and *D. sciurea* (R.Br.) Hook. f. In overall appearance, *D. hirtella* is virtually indistinguishable from *D. rara*, and several mixed collections containing both species exist at MEL. The new species is readily separated from *D. rara* by the scabrous-pubescent lemma and awn, and by the more distant insertion of the awn from the lemma apex. The lemma of *D. rara* is glabrous, sometimes finely scabrous toward the apex, but never scabrous-pubescent, and the awn is scabrous only. The awns of *D. rara* are inserted 0.1–1.0 mm (av. 0.4 mm) from the lemma apex (compared with 1–2 mm, av. 1.4 mm, for *D. hirtella*). The floret of *D. hirtella* is generally longer than that of *D. rara* (6–8 mm, av. 6.8 mm, compared with 4–6 mm, av. 5.1 mm) as is the awn (15–30 mm, av. 22 mm, compared with 9–23 mm, av. 17 mm) although there is a small degree of overlap in these features. These measurements for floret and awn characters of *D. rara*, derived from numerous specimens at MEL and CANB, agree generally with those given by Veldkamp (1974) and Edgar & Connor (1982).

The specific epithet refers to the scabrous-hairy indumentum of the lemma and awn.

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